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## Indian Standard

## GENERAL REQUIREMENTS FOR CONTROL UNIT FOR AIRTURBINE, DENTAL

- 1. Scope Covers general requirements for dental airturbine control unit.
- 2. Types The dental airturbine control unit shall be one of the following types:
  - a) Mobile,
  - b) Stationary, and
  - c) Attached.

## 3. Requirements

- 3.1 In order to function at optimum efficiency, air compressor which is a part of airturbine shall be capable of delivering oil and moisture free air according to the type of the airturbine used.
- 3.2 A suitable speed regulator to operate the airturbine shall be provided.
- 3.3 The air pressure regulator in the control unit shall be so adjusted that when the speed regulator is put to maximum and the handpiece operating, maximum permissible air pressure is fed to the handpiece. This shall be indicated by the needle of the pressure indicator provided on the top of the control unit which shall rest on the intersection between green and red band of the dial.
- 3.4 An oil reservoir when provided in the control unit shall be filled only with oil supplied by manufacturer to the top level line. When the equipment is operated, the oil shall drip with a minimum of 20 drops per minute for which an indicator shall be provided.
- 3.5 Water to the bur head shall be obtained by operating a suitable switch. A water control valve shall be provided to control the amount of water flowing through the handpiece. Water container used in mobile and stationary types of control units shall be made of corrosion-resisting material and shall be fitted with a replaceable suitable filter to safeguard against the flow of dirt to the handpiece. In case of attached type of unit an arrangement may be provided to supply water at controlled temperature.
- 3.6 In the case of attached type control unit an off-on switch for opening and shutting the current to water temperature control shall be provided.
- 3.7 Water and air supply rubber tubings shall be braided, the softer of the two shall be for air supply. If nylon tubings are used, no braiding shall be required.
- 3.8 A water softner capable of being regenerated by washing through periodically with a solution of common salt shall be provided on attached type control unit to make use of mains water supply. Water softner prevents the formation of lime deposits at the heating element and in the handpiece.
- 3.9 The control unit shall have a holder for placing the handpiece when not in use.
- 3.10 The mobile control unit shall be provided with suitably sized castors having antistatic rubber tread (see IS: 4034-1968 Specification for castors for hospital equipment).
- 4. Workmanship and Finish The surfaces of the control unit shall be finished smooth and shall not have pin holes, blisters, blow holes and other surface defects. The edges shall be even and rounded. Corrosive surfaces shall be painted to shades agreed to between the manufacturer and the purchaser. Prior to painting, the surface shall be degreased, rust-proofed by phosphating and then suitably protected by anti-corrosive primer, either by brushing or by spraying and then finished by spraying in stove enamel or air-drying enamel of the specified shade. The resulting finish shall be hard and shall not readily chip or flake. These parts may also be finished with pigmented cellulose lacquer, conforming to IS: 5691-1970 'Specification for lacquer, cellulose, pigmented, finishing, glossy'.
- 5. Instructions for Use and Maintenance The control unit shall be accompanied by instructions manual giving information regarding unpacking, installation, operation and maintenance.
- 6. Marking Each airturbine control unit shall be marked with the manufacturer's name, initials or registered trade-mark.
- 7. Packing—Each airturbine control unit shall be packed in a well-cushioned sturdy case to withstand rough handling during transit. The case shall be waterproof inside. Alternatively the airturbine control unit may be packed as agreed to between the purchaser and the supplier.

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Revised Price